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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,363	09/12/2003	Michael S. DeFranks	SMCY-P01-101	6758
28120 7590 01/04/2010 ROPES & GRAY LLP PATENT DOCKETING 39/41 ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624				
EXAMINER BONK, TERESA				
ART UNIT		PAPER NUMBER		
3725				
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01/04/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/661,363

**Applicant(s)**

DEFRANKS ET AL.

**Examiner**

Teresa M. Bonk

**Art Unit**

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 September 2009.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-9,11-51 and 53-83 is/are pending in the application.  
4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,3,5-9,11,17,22,23,28,33,34,51,53,59,64,65,70,75,76 and 81-83 is/are rejected.  
7) ☒ Claim(s) 2 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-646)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims **withdrawn** from consideration are 12-16, 18-21, 24-27, 29-32, 35-50, 54-58, 60-63, 66-69, 71-74 and 77-80.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3, 5-9, 11, 51, 53 and 83 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown (US Patent 3,478,408).**

Brown discloses an apparatus for manufacturing a coil spring from a wire, comprising a coil-spring winder (37) that forms the wire into a coil spring (13) having a plurality of turns; and a wire holder (28) including a reel (28) being rotatable about a reel axis that supplies the wire to the coil-spring winder along a feed direction, the wire holder supported, along a holding axis, by a low-friction coupling (28 and 30) that allows the wire holder to rotate freely about a holding axis (Column2, lines 32-36 and Column 3, lines 50-55).

With regards to the limitations requiring “a wire comprising a plurality of strands twisted together” and claims 5-9, Brown’s apparatus would be capable of being used with the different types of wires. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

With regards to claim 3, Brown also discloses wherein the rotation of the wire holder is synchronous with formation of the turns of the coil spring by the coil-spring winder (Column 2, lines 43-45).

With regards to claims 11 and 53, Brown also discloses wherein the reel axis is essentially orthogonal to the feed direction (see attached Figure 1 on page 6 of this Office action).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 17, 22, 23, 28, 59, 64, 65, 70, 81, and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Sticht et al. (US Patent 4,523,447).**

Brown discloses the invention substantially as claimed except for further including a motor for rotating the reel/wire holder about the reel/holding axis, and for dispensing the wire along the feed direction from the wire holder and further comprising a motor controller responsive to the longitudinal tension measured by the tension sensor and being operatively engaged with the motor for regulating speed or direction of rotation of the motor. Sticht is relied upon to teach a wire coiler device including a motor (88) for rotating the reel/wire holder (85) about the reel/holding axis, and for dispensing the wire along the feed direction from the reel/wire holder and further comprising a motor controller (90) responsive to the longitudinal

tension measured by the tension sensor (91) and being operatively engaged with the motor for regulating speed or direction of rotation of the motor including periodically starting and stopping the supply of wire (Column 7, lines 59+ - Column 8, lines 1-22). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a motor and subsequent controller and sensor in Brown, who is silent on the assembly that rotates the spool 28, because combining prior art elements according to known methods yield predictable results.

**Claims 33, 34, 75, and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown in view of Sticht and Otzen et al. (US Patent 5,865,051).**

The combination of Brown and Sticht discloses the invention substantially as claimed except for further comprising a torque sensor for measuring torque acting about a cross section of the wire and further comprising a motor controller responsive to the torque measured by the torque sensor. Otzen is relied upon to teach a wire coiler having a torque sensor (E1) for measuring torque acting about a cross section of the wire and further comprising a motor controller responsive to the torque measured by the torque sensor (Column 4, lines 24-30, 55+). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a torque sensor because combining prior art elements according to known methods yield predictable results.

***Allowable Subject Matter***

Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

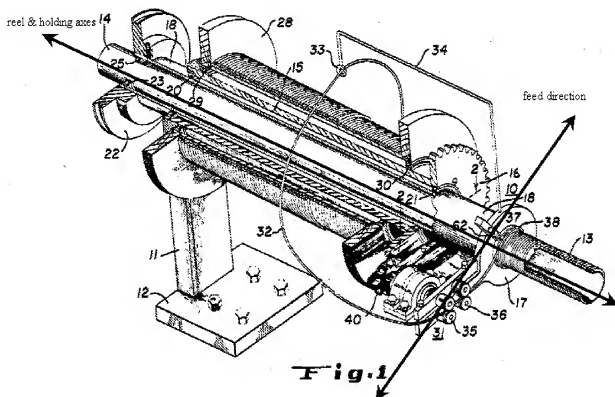
It is in the opinion of the examiner that the art of record neither anticipates nor renders obvious “wherein the holding axis is essentially aligned with the feed direction” in combination with the rest of the claimed limitations set forth in the independent claim. The Examiner understands that this claim limitation also inherently requires the holding axis (619) to be essentially orthogonal or perpendicular to the reel axis (629), as seen in Applicant's Figure 6. The Brown reference discloses the holding axis to be essentially aligned or parallel to the reel axis, while the holding axis is essentially orthogonal or perpendicular to the feed direction, as discussed in the Response to Arguments section of the Office action.

***Response to Arguments***

Applicant's arguments filed September 21, 2009 have been fully considered but they are not persuasive.

With regards to the Brown reference and the independent claims 1, 51, and 81-83, the Examiner maintains that the claims have not defined a relationship; that is, a coordinate system or frame of reference, between the “reel axis” and “holding axis.” Therefore, the Examiner maintains that the reel axis and the holding axis limitations are considered to be met by the same or essentially aligned axes in the Brown reference. See attached Figure 1 on page 6 of this Office Action for clarification.

With regards to the limitation “a coupling that allows the wire holder to rotate freely about the holding axis in response to a torque acting about a cross section of the wire,” the Examiner maintains that the Brown reference discloses a coupling, ball bearing assemblies 29 and 30, that allows the wire holder to rotate freely about the holding axis and this action would be capable upon a torque acting about a cross section of a wire [Column 3, lines 50-55].





***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERESA BONK whose telephone number is (571)272-1901. The examiner can normally be reached on Monday-Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on 571-272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dana Ross/  
Supervisory Patent Examiner, Art Unit 3725

Teresa M. Bonk  
Examiner  
Art Unit 3725